

# *Brief Manual*

*SSP/W-x.x*



# CONTENTS

<b>1. Introduction</b> .....	<b>3</b>
<b>2. Program start and end</b> .....	<b>3</b>
<b>2.1. Program install</b> .....	<b>3</b>
2.1. Program start and end .....	4
<b>3. Program operation flow</b> .....	<b>5</b>
<b>4. Using remark</b> .....	<b>6</b>
<b>5. Display composition</b> .....	<b>7</b>
<b>6. Program function composition</b> .....	<b>8</b>
<b>6.1. Edit Screen</b> .....	<b>8</b>
<b>6.2. Menu Bar</b> .....	<b>9</b>
<b>6.3. Tool bar</b> .....	<b>9</b>
<b>6.4. Sub tool bar</b> .....	<b>10</b>
<b>7. Data composition</b> .....	<b>13</b>
<b>7.1. Configuration data</b> .....	<b>13</b>
<b>7.2. Sewing data</b> .....	<b>14</b>
<b>7.3. Jump data</b> .....	<b>14</b>
<b>7.4. Order of elements/sewing order of sewing data</b> .....	<b>15</b>
<b>7.5. Selection of elements with the mouse</b> .....	<b>15</b>
<b>8. Input function</b> .....	<b>16</b>
<b>8.1. Input of configuration and sewing</b> .....	<b>16</b>
<b>8.2. Input of mechanical control commands</b> .....	<b>19</b>
<b>9. Edit function</b> .....	<b>19</b>
<b>9.1. Edit of configuration/sewing</b> .....	<b>19</b>
<b>10. Data process</b> .....	<b>21</b>
<b>10.1. Copy, Paste, Cut, Undo</b> .....	<b>21</b>
<b>10.2. Extension / reduction, rotation, move, reflection</b> .....	<b>21</b>
<b>11. Input / output of sewing data</b> .....	<b>23</b>
11.1. File Open/Save .....	23
11.2. ROM Data I/O .....	23

# 1. Introduction

This is the Brief Manual that explains general contents and how to use this program.

## 2. Program Star and End

### 2.1 Program install (Windows95 don't support)

- 1) Computer O/S must be newly released version than Windows98.
- 2) Insert install diskette and double click "setup" execution file
- 3) When "**Welcome**" window appears, click "**Next button**".
- 4) Click "Yes button" when software license appears.
- 5) When "**User Information**" window input **user name**, **company name** and click **next button**.
- 6) You might see the window that asks you the folder you want to store. If you want to change the folder click **Browse button** and select one. For next procedure, click **Next button**.
- 7) On "**setup window**", select "**Typical**" and click **next button**
- 8) On **Select Program Folder** windows, click Next button.
- 9) Program installation is finished clicking **Finish button**
- 10) Now you can see that this program is registered on program menu of start menu
- 11) If you follow installation procedure, the installation is finished successfully.

◆ **Reference: If you execute the program right after installing the program, it won't work and the program will seek Key-Lock. You have to install Key-Lock Driver and link it before you execute the program.**

#### 2.1.1 Key-Lock Driver installs

- 1) If you have installed the program, you can find out newly made Key-Lock Driver folder in installed directory.
- 2) **Setup.exe** is located in that folder, double-click this file, and then Key-Lock Driver will be installed automatically.
- 3) After installing **Key-Lock Driver**, connect **Key-Lock** on **Print Port** of PC

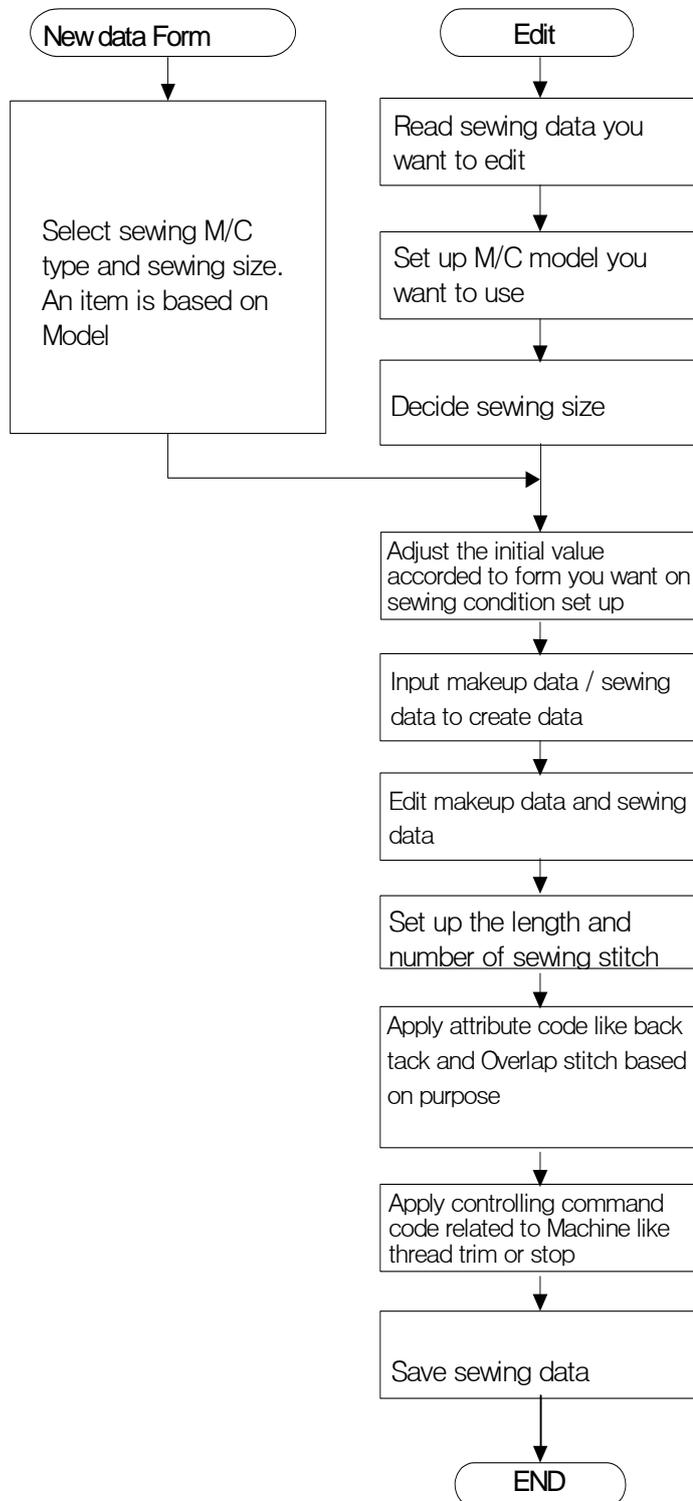
## 2.2 Program Start and End

After installing the program in PC, connect Key-Lock to printer Port. (If user executes the program without this procedure, Error message will appear), The program is stored that the user selected. The user will find program **icon** on **Start Menu - Program- SunStar SSDP –SSDP Ver.2.0]** By clicking the icon or execution file in the program folder, the program start and START Dialog appears. As to user's purpose, setup machine type and sewing area and start the program.

To finish the program, save file and select exit on file menu or click close button [X] located on right upper part of the program window. While the program operation, never disconnect the **Key-Lock** from the PC. Before exit the program, keep in mind to save the sewing data.

### 3. Program Operation flow

As follow flow shows the most general flow of the program by simple explanation.



The sewing M/C model that is given a definition can influence to output data format mode and resolution

Defined stitch length and width on sewing field set up decide edit field on screen and appears symmetry on the center of screen

Set up stitch length and width

Creating sewing using inputted makeup data

## 4. Warning of using

When you use program, you always obey in this important contents. Program user should read.

1. SSDP offers function that makes or edits configuration data or needle data by using arrow key of keyboard. In advance, users have to know well one thing regarding screen mode. The program is installed by fitting window size of program automatically to user's monitor size. If user use arrow key of keyboard to input & edit data, after changing the size of window set by program, you have to know the fact that it will not inputted normally by using arrow key because of discord by break mapping relation of window screen. That is to say, it does not mean that it is impossible to input data but it distort about 3~4mm from the coordinates. But with mouse point, it is inputted normally
2. Configuration data like circle can't adjust size by asymmetry. To enlarge the date, even though the value of X & Y is differently inputted respectively in **extension / reduction function**, the value of X & Y is always symmetry apply, so the x, and y size are made the same. **But to enlarge / reduce asymmetric the sewing data that is including configuration data, by deleting configuration data and make the attribute to Point Stitch, asymmetric extension / reduction can be performed**
3. **You'd better avoid make sewing data over 10,000 stitches.** Naturally, up to 30,000 stitches can be made but when you make over 10,000 stitches of data, it can cause slow down of program and sometimes make it down. Even with this problem, if you want to edit over 10,000 stitches of data, make **stitch on** in **view menu** when edit, and make **stitch off** when you don't edit. Then it can reduce the slow down problem a little bit.
4. On occasion using **Zoom in/ Zoom out** tool, when you zoom in beyond the limit of extension rate, **message Box appears and you can't enlarge any more. In this state, if you try to enlarge continuously, it could cause lose of the data existed on the screen. So, don't extend any more and have to reduce the data by Zoom Out. In addition, on occasion reduction by Zoom Out, when you reduce the data until almost invisible, the program could be down.** So you had better not reduce that kind of degree. Keep in mid this reference.
5. Before actualize each function respectively, you have to choose data that you would like to apply. When selection of data, **configuration data appear by blue** and **sewing data appear by red**. If you actualize function in any data, even though blue and red color appears automatically, you had better select again with mouse and apply it.
6. After execute several operation such as input / output files, when you create first sewing data, if the jump was not linked automatically, **delete all the data displayed on screen** and execute again, then the breaking phenomena of the jump form the origin can be removed

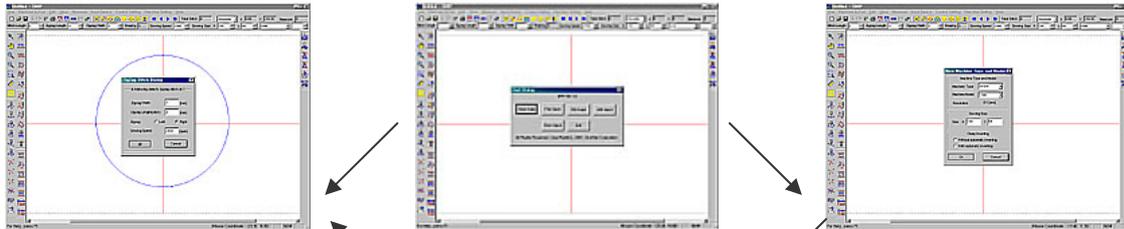
## 5. Display composition

The display of program is composed as following dialog [1]

First sewing parameter input window

Start Window

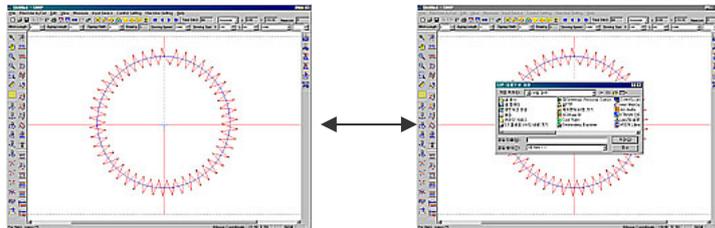
M/C model set up window



Edit window

Sewing data save window

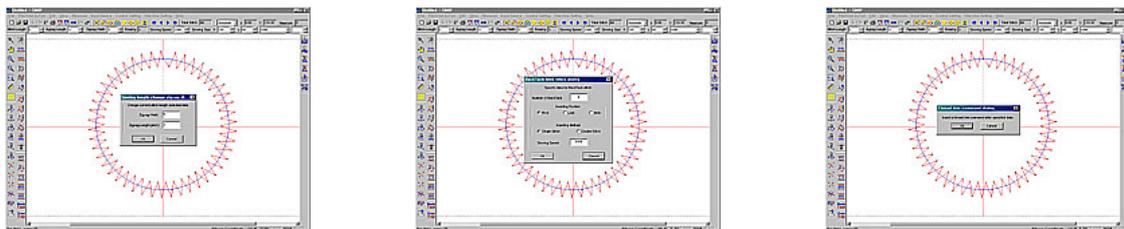
Program end



Stitch width set up window

BackTack set up window

M/C control command code input window



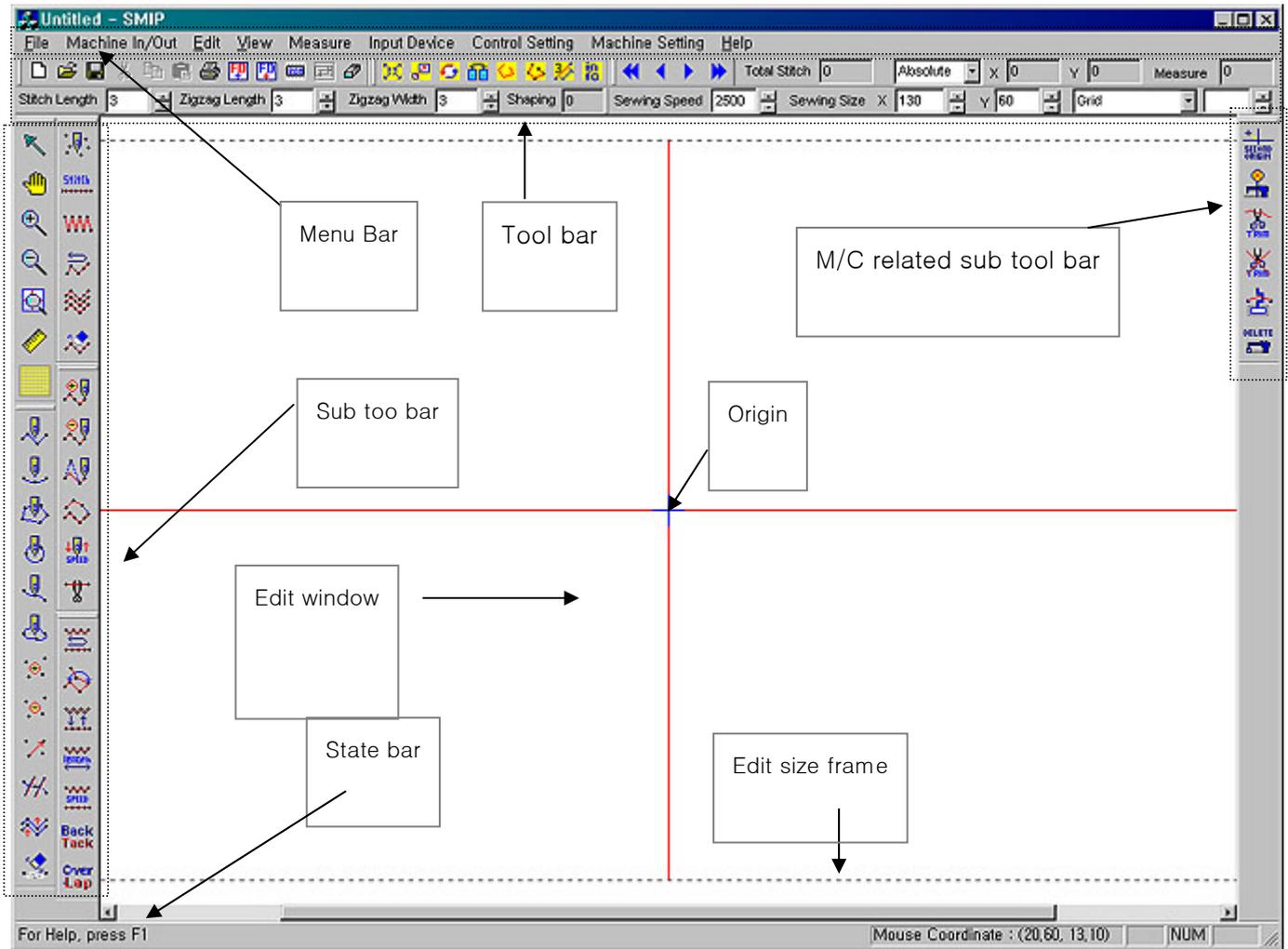
Picture [1]

※ Besides above function, there are various windows of function. The above shows basic composition of the program

## 6. Composition of program function

### 6.1. Edit Screen

The following picture [2] shows GUI and edit window. Whole input and edit operations are executed in this window.

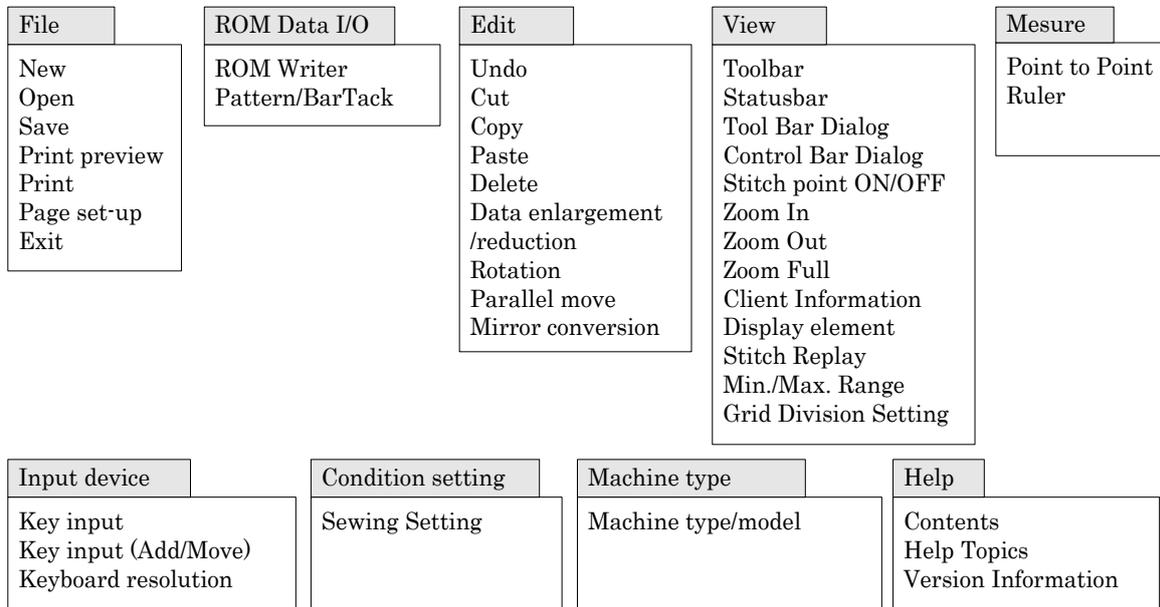


Picture [2]

When you locate the mouse cursor on menu bar, sub tool bar or tool bar. Etc., some message is appeared on state bar and shows the procedure of next progress. According to the message, click the left button of mouse on edit window and input data. Depending on the execution of dialog box, you can operate program by creating and edit sewing data

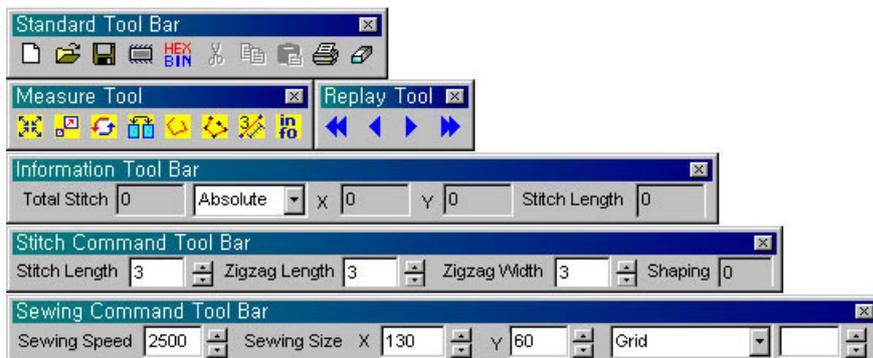
## 6.2. Menu Bar

Menu bar is composed of following functions



## 6.3. Tool bar

Too bar supplies the function, which are displayed in menu bar, user-friendlier in the way of button from. And tool bar include sub tool bar. Tool bar displays information of input coordinates, the number of stitches or another variety of situation.



Picture [3]

The first tool bar, **Standard Tool Bar**, has variety functions applied to works that starting new operation, saving created data into hard disk, floppy disk and ROM, printing out the data displayed on screen and etc.

**Measure Tool Bar** supplies the functions that extension / reduction, move, rotate, turn over, show/ hide stitch of created data and information output of each composed elements.

**Replay Tool Bar** indicates the order of configuration date and sewing data generated on screen.

**Information Tool Bar** indicate the total number of stitches of created sewing data, stitch distance measured on Measure function and absolute / relative coordinates of position of data when input data on screen.

**Stitch Command Tool Bar** has function to set up the parameter of Pitch and Length of Stitch data and displays number of input points of configuration data.

**Sewing Command Tool Bar** supplies the function of controlling present sewing speed, the size of sewing area, Grid. The function of Stitch Command Tool Bar and Sewing Command Tool Bar is not supplied in this version of program and will be fulfilled on upgraded version. We hope you don't be confused.

#### 6.4. Sub Tool bar

The following **Edit Tool, Data Tool, Sewing Tool, Sewing Edit Tool, Sewing Change Tool, Machine Tool Bar** provides functions related to actual Punching.

All punching-related operations are done within this function tool bar.



**Edit Tool Bar:** It offers the **zoom in/out** function that enable to extend or reduce sewing area as seen present. By using Hand Tool, You can move enlarged sewing area freely too. Besides, It also offers the ruler function that make user check the size easily by displaying ruler at left and topside (this function is not used in this version). The Grid Line function, which make user easily input data as showing the sewing area separated in cross shape, supports Grid Line skill something.



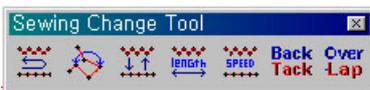
**Data Tool Bar:** Data Tool Bar offers functions of input configuration data in order to create Sewing Data Tool. It is composed of many functions, which generate various shapes like **Normal Line, Arc, Polygon, Circle, Spline, and Closed Spline** Input. It offers input, erase, and move functions to edit one point of configuration data, and whole functions of generating, editing just like **Divide, Offset, Data erase** etc function.



**Sewing Tool Bar:** Sewing Tool Bar, based on already inputted configuration data, is what makes actual sewing data. It offers **Point to Point Stitching** function that enables to input each every stitch, **Normal Stitching** function that leads to general sewing data, **Zigzag stitching** that makes Zigzag shape. It gives **Reverse Stitching** that enables to generate made sewing data in several times, **Multi stitching** that enables to create several sewing data at one time with the function of offset and gives **Delete** function to delete sewing data. All process can be performed after selecting configuration data or sewing data that you want to apply.



**Sewing Edit Tool:** It includes the function that enables to edit created sewing data. This tool has almost the same function with 'edit function of configuration data'. It is only different in point of applying to actual sewing data. Input / delete Sewing Data and Needle Move is the same concept of configuration data. **Stitch Point Join** function links the jump space with two stitches, one 'Point to Point Stitch' to another 'Point to Point Stitch'. **Point Speed Change** function is not ready yet. (It will be offered on full version) It also offers **Sewing Data Divided** function that enables to choose and separate random points of created sewing data.



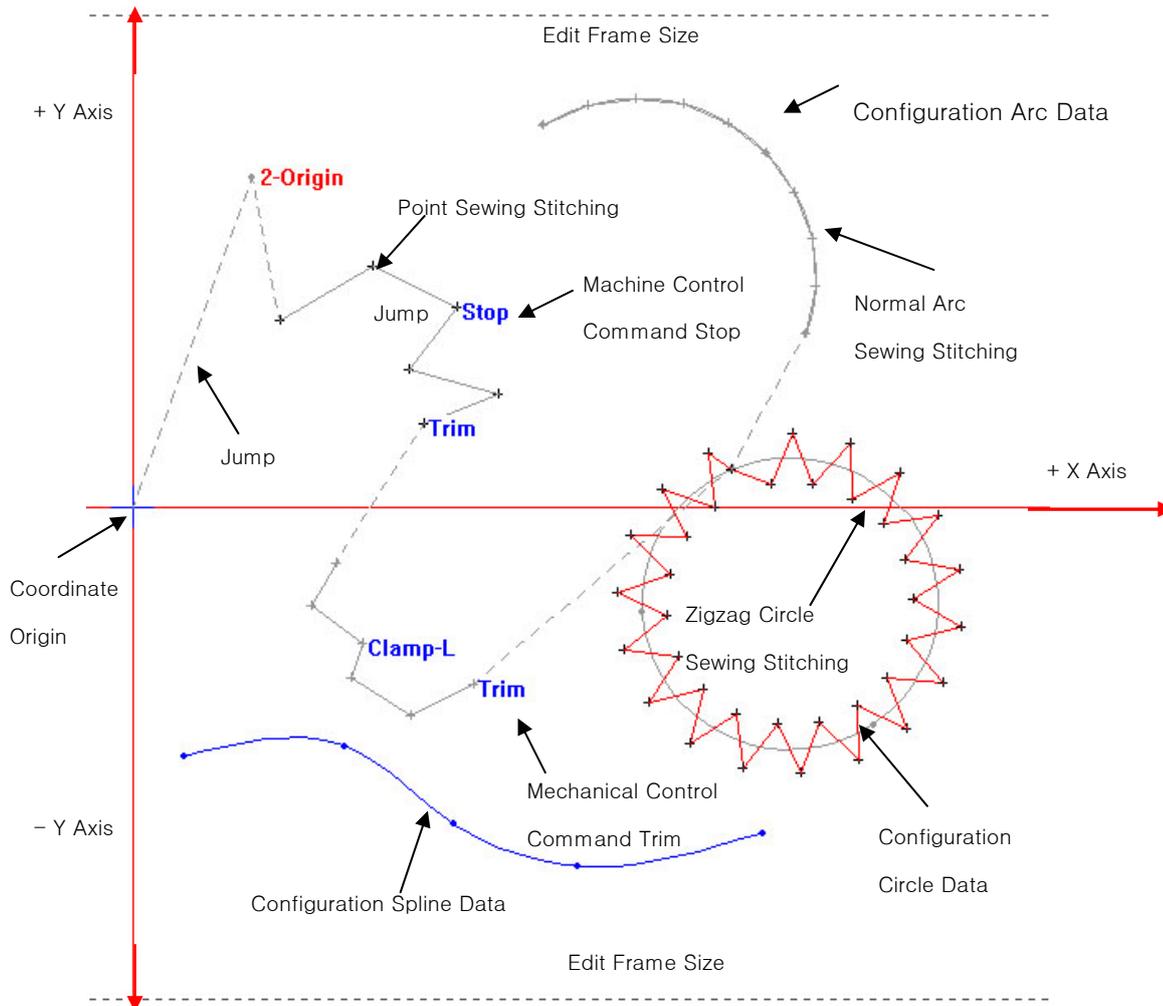
**Sewing Change Tool:** It offers the function that can change the attributes of created sewing data. **Sewing Direction Change** has the function of changing the direction of sewing data. **Sewing Order Change** offers the function of changing the order of two sewing data in a row. **Sewing Attribute Changes** has the function of converting 'Normal Stitching' into 'ZigZag Stitching', 'ZigZag Stitching' into 'Normal Stitching'. It can also change stitch length, and stitch width, too. **Sewing Length Change** alters the pitch and length of every sewing data shape. (This function is not used in Demo, Full version enables it.) **Back Tack** offers the function of making more stitches, defining the number of stitches of start and the end. **Overlap** is the function of adding sewing stitch number data, defining the needle number sewing data created, which shall generate the number of defined needle (Last-generated point means start point) Last sewing data point is regenerated as last-added needle number.



**Machine Tool**: It includes machinery control tool. **Second Origin Command** function makes user set up second origin point apart from original origin point. **Machine Stop Command** gives the function to make stop temporarily, by inserting stop-code on some sewing point. **Thread Trimming Command** offers the function to add trimming operation in random point of created sewing data. **Thread Trimming Delete Command** cancels inserted trimming code. **Thread All Trimming Command** offers the function to execute thread trimming at the last point of every sewing data automatically.

## 7. Data Composition

The form of data can be divided into several forms. First group is things like configuration data. That is basis to create sewing data like **Normal Line, Arc, Circle, Polygon, Spline**. Second group is the sewing data created by configuration data, and third group is **machinery related control command** that can be combined in basis of created sewing data. The below Picture [4] is demonstrating simple construction of data; following chapter explains that more concretely.



### 7.1 Configuration data

As explained in the former, configuration data is data to be basis for creating sewing data. That is, sewing data is created in basis of configuration data. Configuration data has the kinds of **Normal Line, Arc, Polygon, Circle, Spline and Closed Spline**. Configuration data appears in blue point and line when inputting and creating configuration data. The method is clicking mouse-left button in sewing area after choosing any button among configuration data functions of Sub tool bar. That is, it is showing chosen configuration data now. If you create

another configuration data previous- chosen configuration data is changed with gray, present- created configuration data appears with blue again. As knowing in the upper drawing [4], line of parts tinged with blue is present- chosen configuration data, configuration data of Spline. The form of configuration data is always blue circle with round joint part.

## 7.2 Sewing data

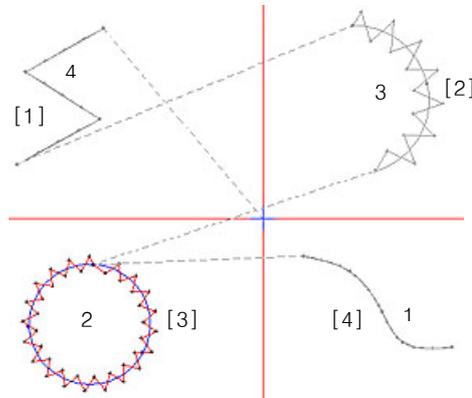
Sewing data can be divided into three groups. The first group is Point Stitching, second is sewing data to be created with configuration data. The third is machinery related control command that can be adapted with relating the created sewing data. The first is sewing data which user can insert one by one stitch data directly, you can see it in Point Sewing Stitch of upper picture [4]. Jump is created automatically when sewing data is created in first time. That is, jump is created automatically taking starting point as standard, end of jump is transformed into first point of Point Stitching. As explained in the former, color of configuration data is blue but color of sewing data is red. The presently created data always appears in red color as configuration data does, other data appears in gray color. The second, sewing data is sewing data created by configuration data. As upper drawing shows, configuration data called Circle is created and then sewing data is created in basis of Circle with selecting Zigzag Stitching form. You can also see Point Stitching created in the former and jump created automatically. The data created in basis of configuration data among sewing data recreate sewing data matching with changed form when configuration data is changed. The third machinery related control commands are second starting point, momentary machinery pause, cutting thread in any position of sewing data, clamp reverse/ anti reverse. The upper drawing [4] includes second starting point, momentary machinery pause, clamp reverse/anti reverse and cutting thread order. The first second starting point is created between starting point and Point Stitching. As appear in drawing, form of second starting point manifests itself in "2-Origin" text. The second starting point always exists among sewing data created in center of starting point. Excepting that, momentary machinery pause order " Stop", clamp reverse/ anti reverse " Clamp-L " and cutting thread created in end position of each Point Stitching exist. The form of cutting thread order is "Trim" text. And general joint form of sewing data shows black form crossed with cross-form.

## 7.3 Jump data

**If two other sewing data exists, jump data always exists between two sewing data and is created automatically.**

As upper picture [4] shows, jump is always created from origin automatically when sewing data is created for the first time; jump is also created automatically in each section of sewing data. Jump data is deleted automatically when sewing data is deleted; new jump is created again matching with fore and behind sewing data among deleted sewing data. Jump data can't be edited, always shows form of gray point and gray line

#### 7.4 Order of elements/sewing order of sewing data



Picture[5]

Order of sewing data is created independently by order of configuration data. That is, created sewing data is always created in order of uniform order, configuration data related with sewing data is related with sewing data regardless order. For example, upper drawing [5] shows that four configuration data was created. Number of configuration data manifests itself "1, 2, 3, 4", number of sewing data manifests itself "[1], [2], [3], [4]". When you create sewing data selecting fourth configuration data the created sewing data becomes sewing data [1] of [1]st. Therefore [1]st sewing data includes fourth configuration data. And then when you create sewing data using third configuration data again [2]nd sewing data is created joining jump with previously created [1]st sewing data automatically, third configuration data is connected with [2]nd sewing data. If you want to see that creation order you can confirm creation order with selecting **Replay Tool** in tool bar.

#### 7.5 Selection of elements with the mouse

Selecting data with the mouse is easy. **Selected data appears on screen with clicking each data because configuration data and sewing data is independent each other.** Configuration data appears in blue color, sewing data appears in red color, mouse icon always appears in cross form in the sewing area. Of course, if moved to tool bar it is transformed into arrow mark automatically. If you move mouse button to position of sub tool bar that you want to choose, click left-mouse button selection is made and selected sub tool bar position is shrunk. If you want to select configuration data and sewing data that exist in the sewing area you have to select joint of data. Of course, that isn't joint but each stitches data in case of sewing data. Joint of selected configuration data appear in circle, is blue like configuration data and sewing data appear in red and black indicating stitch data. Speaking selection theory of configuration and sewing data simply, selection of configuration data is made when you select joint point scope for selection in area of width " 3 pixel ~ +3 pixel and length " 3 pixel ~ +3 pixel". If you want to select sewing data

more accurately sewing data has to be selected in the scope of **width" 1 pixel ~ +1 pixel "** and **length "1 pixel ~ +1pixel"**. The reason is that it improves accuracy in case of editing and inputting Stitch.

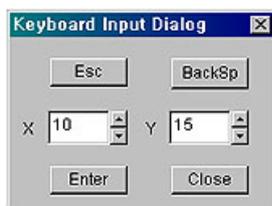
## 8. Input Function

### 8.1. Input of configuration and sewing

As you choose function button, you can input data. Once you choose function button, the button is placed a little bit lower. You can start inputting data by clicking left button on the mouse. When you finish work, you click right button on the mouse, then inputting data is done and the button was chosen get back to its place. When you want to cancel the work, press 'escape' key. Then every data you inputted so far will be canceled. But 'escape' key doesn't work after inputting data by clicking right button on the mouse.

Besides, this program has other ways to input data. The first one is using '→'(arrow) key and the second one is using by number key. The first way to input data is much similar to the way by mouse. The only difference is using '→' key and space bar instead of mouse. Take a simple example, choose data you want to input at the sub tool bar or choose a point stitching by mouse in case you want to input data directly into sewing machine. After you choose, locate cursor in sewing area. As you moving arrow key, cursor of mouse will move. When cursor be located in right point you want to input, press space bar. Then inputting data is done. When you using arrow key, the minimum unit is 1 pixel (0.1 mm) and this pixel is fixed. If you want to change value of unit, you can set up at the key resolution in menu. For your information, If you set 1 mm up to 10 pixel. the minimum unit will be 1 mm. But we mentioned before, the window system needs to be maintained as it set up first. When you want to finish work, press the right button on the mouse or press 'end' key on the keyboard. **(It is useful for minute operation like editing stitches)**

The second way to input data is clicking function button at the sub tool bar. Click '**key board input**' at the menu input device. Then you can see the windows like bellow, picture [6]

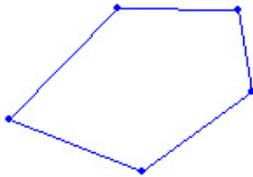


As shown in the left figure, pressing the enter key after typing coordinate values of X- and Y-axis makes the data displayed on the screen. Press the close button to finish data inputting. **ESC** and **BackSp** keys are applicable during inputting, Esc key is the same as the above function. **BackSp** key is used to delete one by one from the end of inputted data.

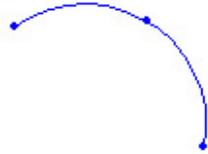
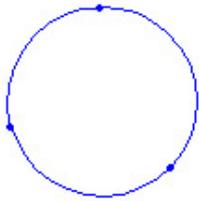
The followings simply show the configuration data created according to the above procedures.



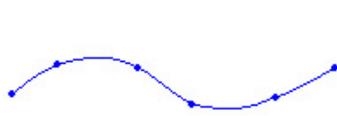
Left figure shows normal line of constructing data. In case of **normal line**, whenever inputting the data in its position, an interval between two points is automatically connected.



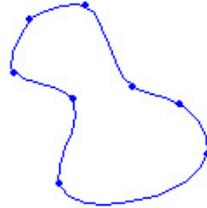
In case of **polygon line**, the shape is constructed by inputting data in the same way which constructs normal line. By the way, final closing parts are automatically connected via holding down right mouse button after inputting first and last data values.



In case of constructing data such as **arc line, circle lines**, there are some differences from above mentioned methods. In previous two methods, just as inputting data, the line is automatically created between data points. But in case of arc and circle, only points are created when two points data inputted. If three points are inputted, arc or circle is automatically created. This is caused by the fact that arc and circle is always composed of 3 points. Completion is achieved via holding down right mouse button.



are displayed continuously. The



**Spline** and **Closed Spline** are constructed by similar method used in constructing arc and circle. When three points are inputted, creation is not achieved whereas points curve is created via holding down right mouse button.

Now, the following introduce generating methods of sewing data in brief.

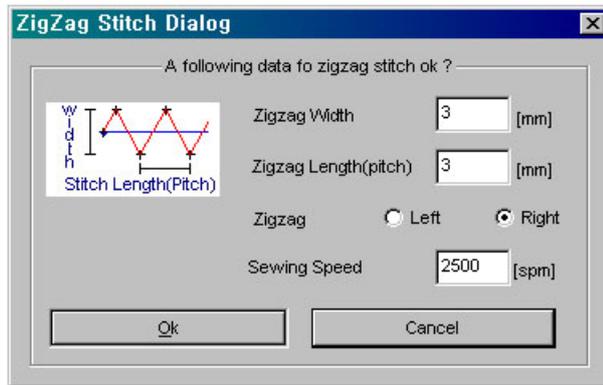
**Point Stitching** method is same as Construction Data Input method mentioned before. But when you input point stitch data first time, Jump generated automatically on the basis of origin.

Stitch data generation based on the Construction data is as follows.

Select the construction data, which you want to generate if there are some construction data in the sewing area. Then the construction data shall be changed to blue color. After that, Click **the Normal Stitching or Zigzag Stitching** button on the sub-toolbar. Then finally you come to find the dialogue box like as picture. [7], [8]

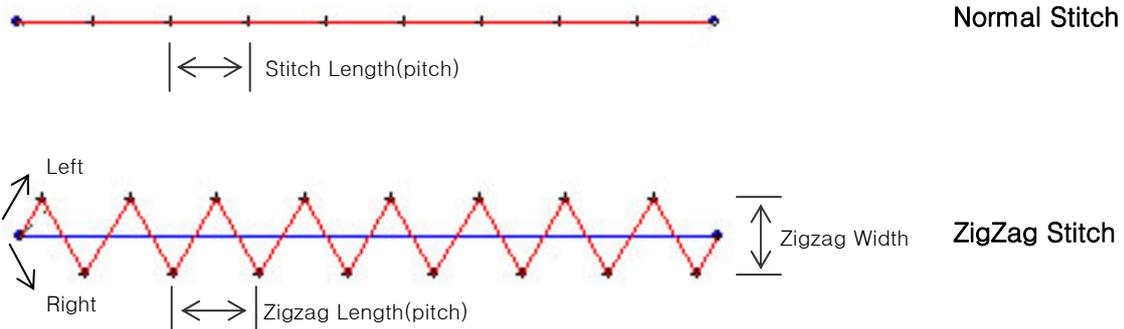


picture [7]



picture [8]

The picture [7] is for Normal sewing data and picture [8] is for Zig-zag sewing. There is a parameter for each dialog box and you don't need to input on the speed related parameter.(Not available now). So, below is the actual sewing data for your better understanding on the parameter.



Each parameter has **Length (Pitch) and Width between stitches**. Normal type stitch just has parameter for length but Zigzag type has parameter for Width beside Length. You can see the generated sewing data by pressing down the button after selecting parameter value.

## 8.2. Input of mechanical control commands

At first, select the function button to use and move to the position you want apply. Then do a function. As we explain before, there are **second origin, thread trimming, machine stop command, invert clamp, machine pause and etc. for machine related commands**.

For example, if you want to add thread trimming function in the sewing data, first select the thread trimming

button.(the button shall be turn over) and then move to the position and click the mouse, then finally you can see the blue rounded dot. Now press down the right button on the mouse and there is a question for your selection. If you press down the 'OK' button, blue colored text, 'Trim' appears and trimming function added.

And also other commands **like machine stop, clamp inverting/counter inverting** and etc. have same procedure but machine stop function has "Stop", Clamp Inverting/counter Inverting has "clamp-R/Clamp-L".

The method for second origin is different from others because it is not selecting the stitch data but applying to the position of sewing area and also almost same as input the position stitching data and has two kinds of input method.

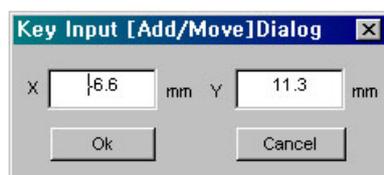
**One is input without sewing data and the other is input when there is sewing data. The former has second origin at the place you input like Point Stitching and automatic jump from the actual center. The latter has the second origin between the first sewing data which is generated from the actual origin and some position of jump and also generates new jump connects the second origin with other side.** The index for 2<sup>nd</sup> origin is "2-origin".

Deleting the machine related commands is same as deleting the one stitch. **If you select the sewing data after selecting the machine related commands deleting button**, the selected data turns over to blue color. Then press down the right button and there is message box and appears question for confirming the delete. There is always message box during the procedure and message on the state-bar to ask for procedure.

## 9. Edit function

### 9.1. Edit of configuration/sewing

There are two ways for editing configuration and sewing data. One is to use the buttons of mouse and the other is to input some value by using a keyboard. Therefore, the data points of the previous configuration and sewing data can be changed by using the functions of 'insert', 'delete', 'move', etc. **What you should know before carrying the above is the fact that if you set up the sewing data by using the configuration data, the sewing data are automatically changed when the configuration data are changed.** For example, suppose that there is a normal line, which consists of 5 points of the configuration data, and you set up the sewing data of zigzag on the data. When you move the configuration data with 5 points or insert some points to the data, new zigzag is set up as to the shape of moving or insertion. This also applies to 'delete' function. Please edit like this, keeping in mind the above. **(The most ideal way in which you set up the sewing data is to make the final design by indicating some properties concerned with sewing after editing and making the sewing data which fit to the actual design after setting the pattern you want**



**by using the configuration and the sewing data)** To be more specific for editing, the way using the keyboard is as follows. However, the data are not deleted in the way using the keyboard.

Picture [9]

Figure [9] shows the edition display. For activating the dialogue box, the configuration data and sewing data should

exist in the edition area and the buttons of **insert function** and data movement should be selected in the tool bar. During the activation like this, the following dialogue box appears if you select the **keyboard input (Add/Move)** among the lower functions of Input Device of the menu, which is at the top of program. In case you insert a data, you select the points of the configuration data and the sewing data first while the function button is being selected. Then the location will be shown in the input space of the dialogue box. At this stage, if you press “**OK**” button after inputting the location values that you want, the data shall be inserted or moved. However, the insert and movement of the data are applied just once

**The second way** of using the mouse is as follows. In case of the movement of the **normal line** configuration data, the selected data are moved when you click the mouse button at the point of the movement after selecting the location by using the mouse button, pressing the concerned function button at the sub-tool bar. In case of **inserting**, the input points will be made if you press the left button of the mouse successively at the location of the insertion. In case of **delete**, you can delete one point by one point. And if there remain only two points, you can delete the configuration data completely if you press the right button of the mouse while selecting the two points successively. When it comes to **Polygon**, the insertion is the same. However in case of deletion, you can delete during selecting the last **3 points**. When it comes to **Spline** and **Closed Spline** the way is the same as the normal line and the polygons. And the sewing data are edited, using the same way with the configurations. **What you must keep in mind is that if you edit the configuration data again after editing the sewing data including the configuration data, the sewing data will also be changed while the configuration data being changed.**

## 10. Data process

### 10.1. Copy, Paste, Cut, Undo

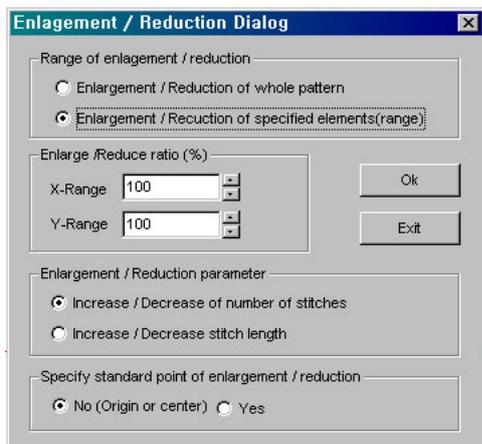
We have shown the above functions generally. The programs of graphic and word have the above functions. Our program has the same way for doing the above function with the general programs and the present version do not have the functions (Upgraded version will have the functions)

### 10.2. Extension/Reduction, Rotation, Movement, Reversion

The above functions can be applied to both the configuration data and the sewing data. If there is the sewing data in the configuration data, the configuration data will be based, then the above functions will be changed. If there is only the sewing data like point stitching, the sewing data are only applied regardless of the configuration data.

And you can select and carry out one of the sewing and the configuration data and the original point however, if you rotate only with the sewing data by 1 degree, the data will be distorted. In order to avoid this, you should rotate on the

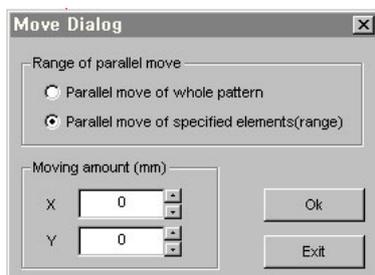
base of the configuration data, then set up the sewing data again. Finally, the whole data in which the configuration data and the sewing data exist cannot have the whole pattern function. But, Movement function is applied. Then, let's explain the each function



**Function of Extension / Reduction:** As seen on the dialog [10], there are varieties of option. **Range of extension / reduction** is an option whether you apply the data to the whole patterns or specified pattern. **Enlarge / Reduction ratio (%)** is for the option that you can apply the ratio to X,Y axis. The standard value is 100. If you set the vale to 150, the pattern is enlarged 50%. **In this point, you have to keep in mind that the data containing circle type or circle sewing data, the value of X, Y axis is not applied independently each other. Except the circle, the X, Y value can be applied independently.**

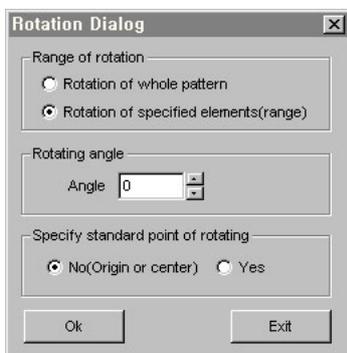
Picture [10]

**Extension / Reduction Parameter** is an option that whether you enlarge or reduce the made data by the extension / reduction of stitch number or length. **Specify standard point of Extension / Reduction** is for an option that whether you enlarge / reduce the sewing data with the standard of origin or center of made data or optional standard. **Specify standard point of extension / reduction** is for an option that whether you enlarge / reduce the sewing data with standard of origin or center of made data or optional standard.



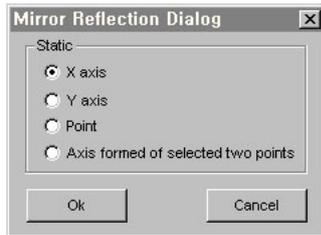
**Move Dialog:** This is a function to move the sewing data. This function is to select whether to parallel move of whole pattern or parallel move of specified elements (range). The X, Y unit is mm.

Picture [11]



**Rotating Dialog:** This function is for rotating the sewing data. **Range of rotation** is an option that whether you apply the data to the whole patterns or specified pattern. **Rotating angle** is to input the data you want to rotate. In this dialog, you have to bear in mind that if you rotate the specified pattern with just  $1^\circ$  (small degree), the twisted image can be generated. So you have to select **rotation of whole pattern** to rotate the pattern just a little bit.

Picture [12]



**Mirror Reflection Dialog:** This function has the same process with mirror. So it is called Mirror function. That is to say, this is a function to makes the same shape of image with converting the data on X, Y-axis. For example, if you want to make a heart shape, it will be difficult to make the image exactly the same reverse image. In this time, it can be easily generated the same reverse image by make just left or right side image and converting it. This function has for option. You can convert the image with datums of X, Y, random point or the two points the user choose. The fourth option is not used at the moment.

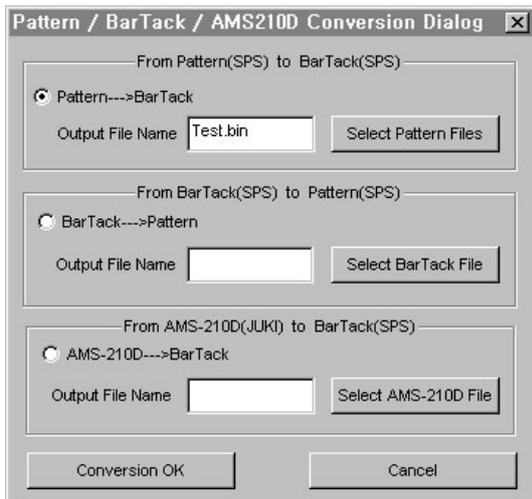
## 11. Input / output of sewing data

### 11.1. File Open/Save

File Open/Save is to the function of open or save sewing dada. This is executed by clicking open and save icon on menu bar located upper part of the program. When you click save icon after punching operation, the save dialog box comes up. One thing you have to keep in mind is that the computer reads the date files as number, **000,001,002....**, you have to save the data with the name of number. And when you want to input several pattern designs into the machines with floppy disk, you have to create “SPS” folder and save in that folder. When you click the save icon and the floppy disk is in computer, “SPS” folder will be created automatically in floppy disk. So, when the save dialog comes up, move to the folder you have to save and save the pattern design. Open file function is the same as the way of saving data.

### 11.2. ROM DATA I/O

In ROM DATA I/O, there are ROM Writer and Pattern/ BarTack. ROM Writer function is for Bartack sewing machine, and it execute the ROM Writer program connected with computer. To utilize this function, the ROM Writer should be connected to computer and the program should be installed. Installation and usage of ROM Writer program will be illustrated on ROM Writer



data to Bartack file.

Pattern/BarTack is for converting the file formation in order to use in various machines. Therefore, it is possible to convert the Pattern file into Bartack file and the Bartack file into Pattern file. Also. It is possible to convert the file made in AMS-210-D of JUKI machines into Bartack file. (For your reference, Bartack → pattern, AMS 210-D → Bartack is not possible at the moment, but it will be possible with upgraded version of program)

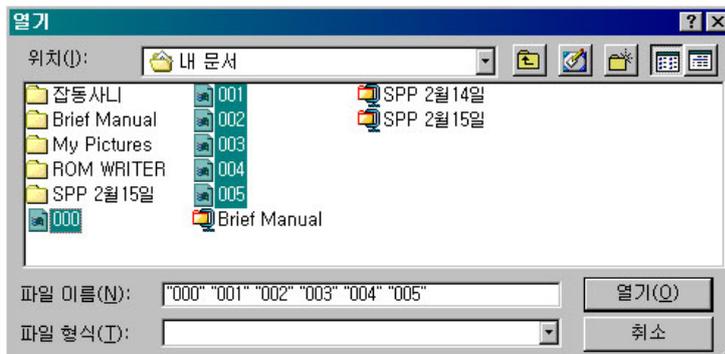
As you see Picture [14], it is composed with three parts.

Picture [14]

As explained above, “Pattern→Bartack” is for converting Pattern

It got Binary Format in order to put files in the ROM. Various patterns are provided from the ROM that all the data should be converted into Binary file. The converting process is as follow,

When converting dial log box appears, select radio button that you would apply. Provided “**pattern→bartack**” is selected, input name of output file created in text input box. It is preferable to name as “\*.bin”. It is not necessary though; it would be good for further purpose of ROM writing.



After naming output file, it needs selecting input file. You can select files to input by clicking a button of “select pattern files”. You will see new dialogue box as picture [15] which might be as same as dialogue box of opening files. Files are to be selected with mouse for inputting and several

Picture [15]

files can be made into Binary file for they are memorized through ROM writer. Accordingly, several files would be input in order in a Binary file. You might see pattern files of “**000, 001, 002, 003, 004, 005**” multi-selected. In order to select files at one time, click the mouse on the left side having Ctrl key pressed. When files are selected, load the files by clicking Open button, click “**conversion OK**” button on initial dial log window, then, conversion file is created. It will be created as “\*.bin” format.